



# "Siamese Fighting Fish, Thailand's National Aquatic Animal and Trade Benefit in the Digital Market of ASEAN"

**Dr. Amonrat Sermwatanakul (Dr. Noi)**

**Presentation at**

**Trade, Technology and Future Tension : Limitless Opportunities and Threats  
2 September 2019, Shangri-La Hotel, Bangkok, Thailand**



- On May 26, 2015 before cabinet meeting, PM named this plakad as "Thxng prakāy s̄æd = Sparkling gold".



- On February 5, 2019, the Siamese fighting fish, known in the West as a betta fish, was named Thailand's national aquatic animal for its historical and cultural significance.



# SFF Farm : Commercial Scale

(300,000-500,000 bottles)



**Breeding Zone**  
6 days



**Nursery Zone**  
(1.5 months)



**Growth out Zone**  
2.5-3 months

**Expectation**  
Auto feeding and changing water machines



# Backyard Home Breeder SFF





# How is SFF aquaculture bring people to trade benefit in the digital market of ASEAN to worldwide?



- What is inside the bottle? Of course => SFF
- What is inside the SFF?  
innovation of genetic improvement by our farmers

## Dominance

**Dominant** = red, opaque, turquoise, steel, royal, butterfly, marble, veil tail.

**Codominant** = Blue iridescence, wild type yellow iridescence, crowntail, doubletail (halfmoon is multifactorial)

**Recessive** = black, yellow, orange, plakot.

## Yellow Layer

No known mutation/genes

## Red Layer

Er<sub>-</sub> (extended red); Vt<sub>-</sub> (variegated fin/butterfly); alleles = nmr (non-red), nr2nr2 (orange); Rl<sub>-</sub> (red loss).

## Black Layer

mm (melano), fbfb (fertile black, black face).

## Iridocyte Layer

**Blue guanophores:** alleles = ++ (wild type, blue green), bl+ (codominance, royal blue), blbl (steel blue).

## Layer Modifiers

**Iridocyte spread:** Si<sub>-</sub> (spread iridocytes).

**Iridocyte opacity:** Op<sub>-</sub> (opaque, additive).

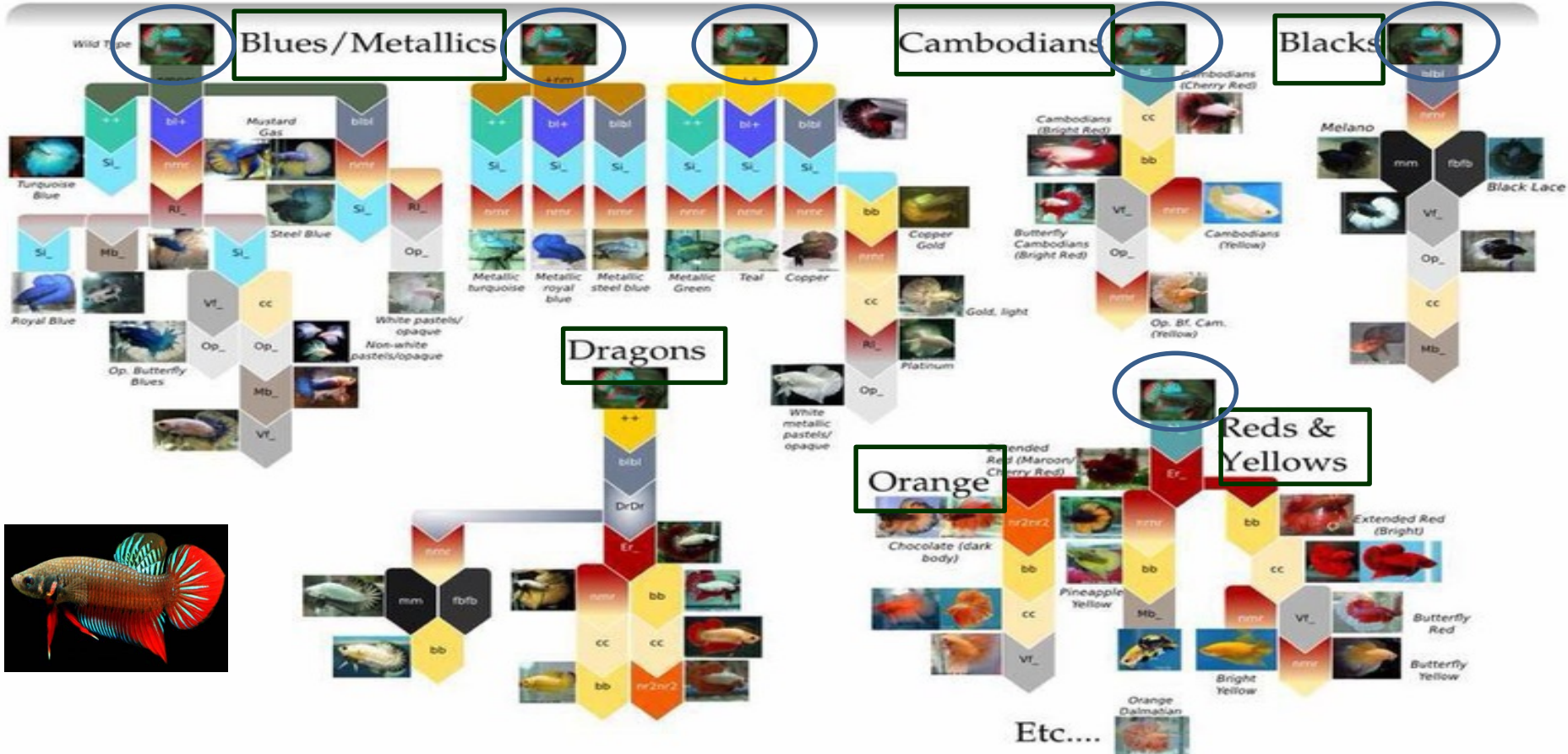
**Marble:** mbmb (randomly turns the color layers off/on; jumping gene. Partially dominant).

**Cambodian:** cc (reduced black, typically flesh body, red fins).

**Blonde:** bb (creates bright red if extended red; silver if steel, washed black).

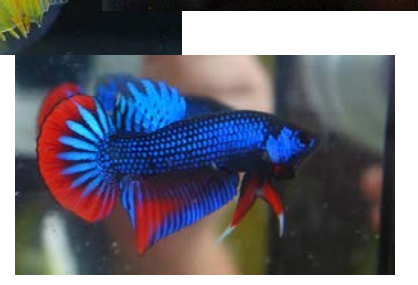
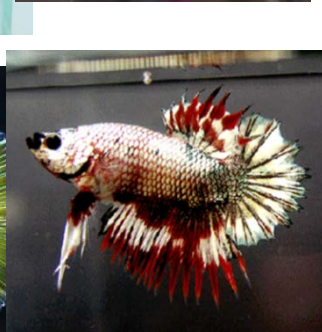
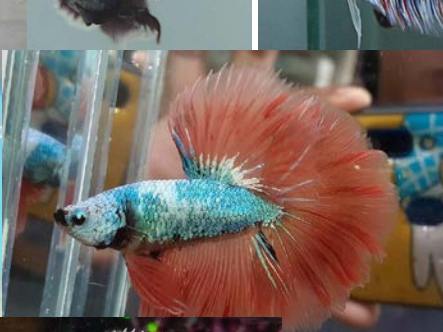
**Dragon:** (thick, opaque, armorlike body scales; not fully understood, probably partially dominant).

**Yellow guanophores:** alleles = ++ (wild type, yellow iridocytes prominent), +nm (yellow iridocytes reduced), nmnm = nonmetallic. Modifies blue guanophore expression.



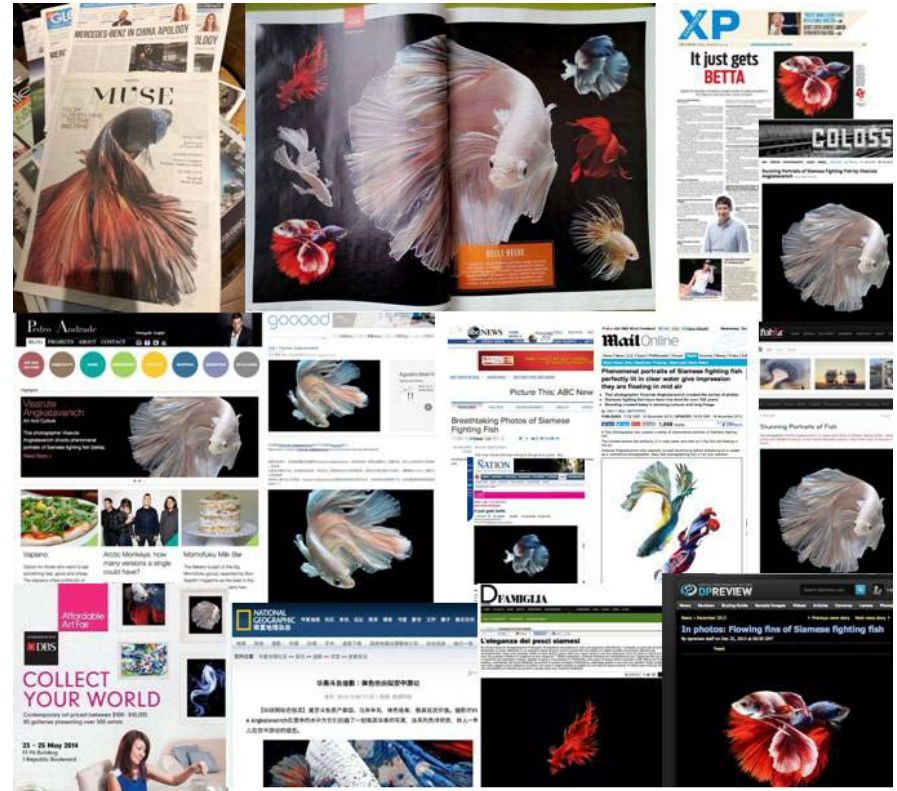


# 15 years





# Digital Marketing connect SFF farmers to 100 country customers







1.

- Product
- Picture
- Product Code
- Post



2.



6.

**Exporting /  
importing  
Trans shipper**



7.



**Worldwide market**

3.



4.

**Bidding  
Winner**



5.

**PayPal**

nodof@gmail.com

รหัสผ่าน

**เข้าสู่ระบบ**

ถ้าคุณมีปัญหากับการเข้าสู่ระบบ

**สมัครสมาชิก**

สวัสดี คุณ Gidabettfarm

เราเพิ่งส่งใบแจ้งหนี้ (0001) ของคุณไปให้คุณ Kelli Abbott ไปรษณีย์  
ทราบว่าคุณจะจัดส่งสินค้าของคุณให้กับการดำเนินการในบัญชีของคุณ

ดูใบแจ้งหนี้ของคุณ

**ข้อความถึง Kelli Abbott**

Thank you for buying my betta. He's going to have a great home after a long trip. I'll take care of the Dumbo Ironman until you hands. Congratulations from Gida bettafarm. Betta is delivered by shipping. Julie Tran #CA E-Mail : flowerhomafrombeyond@yahoo.com Thank you.

**สรุปข้อมูลของใบแจ้งหนี้ของคุณ**

ส่งไปยัง	Kelli Abbott
อีเมล	kelli.abbott@yahoo.com
ส่งมาจาก	Gidabettfarm
อีเมล	jsirwat@gmail.com
หมายเลขใบแจ้งหนี้	0001
วันที่ครบกำหนดชำระเงิน	01 ธ.ค. 2016
จำนวนเงิน	\$45.00 USD

ดูใบแจ้งหนี้ที่ผู้ขายของคุณจะเห็น

PayPal





Thailand, Indonesia  
Singapore Malaysia Philippines  
Vietnam Myanmar Laos



# SFF Topedo Team from the Souththern Part of Thailand to Berlin



Aquarium Glaser GmbH  
อยู่ที่ Aquarium Glaser  
GmbH

28 ส.ค. เวลา 12:04 • Rodgau • 🌐

Betta splendens Pla Kat Halfmoon  
Galaxy Candy

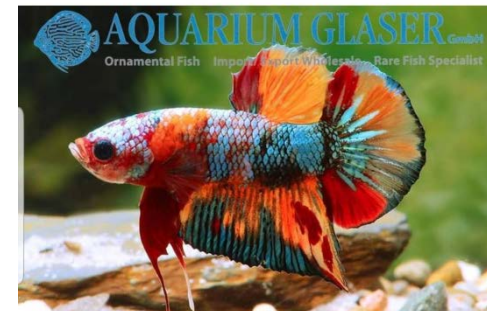
Sometimes you don't know what to  
admire more: the breeding skills of  
#Betta freaks or their creativity in  
inventing new names. However, these  
candies are real beauties; each animal  
is individually patterned and spotted,  
so they are unique! Our dear friend  
Kamphol has sent us an exclusive  
collection of these Betta #splendens  
beauties from #Thailand.

#aquarium #freshwater fish

Best in show and  
Champion Junior class  
from Plakad Contest  
@Pha Ngan, Surathani

Photos & Text Frank Schäfer

><(((((> <°))))>< ><(((((> <°))))><



👍❤️👉 119 ความคิดเห็น 3 รายการ • แชร์ 19 ครั้ง





# Family activities @SFF farms

## Sustainable practice





# Government support Promoting SFF Networks

5 networks  
along the country





# Trade Benefit of SFF in the Digital Market of ASEAN

- SFF
  - Labyrinth organ allows the fish to breathe air from the surface of the water.
  - Easy to breed in the tropical countries
  - Easy for transportation
- タイのプラカット  
TheArielPhoto
- Thailand => National Aquatic Animal
  - Cultural ambassador from farmer directly to customer
  - Connect aquaculture to Industry with creative SFF image
  - Thai Post starts negotiation to China post.

# Creative economy Aquaculture to Industry







"Siamese Fighting Fish,  
will serve  
Trade Benefit in the Digital Market of ASEAN"

